

US EPA ARCHIVE DOCUMENT

**United States Environmental Protection Agency
Region IV
POLLUTION REPORT**

SITE: TVA Kingston Fossil
BREAK: 2.10
OTHER: _____

Date: Monday, December 22, 2008

From: Les Sims and Steve Spurlin, Federal On Scene Coordinators

Subject: Initiation of Action

TVA Kingston Fly Ash Release

714 Swan Pond Road, Harriman, TN

Latitude: 35.894929

Longitude: -84.534744

POLREP No.:	1	Site #:	A4XP
Reporting Period:	12/22/2008 - 12/24/2008	D.O. #:	
Start Date:	12/22/2008	Response Authority:	CERCLA
Mob Date:	12/22/2008	Response Type:	Emergency
Completion Date:		NPL Status:	Non NPL
CERCLIS ID #:		Incident Category:	Removal Action
RCRIS ID #:		Contract #	

Site Description

On Monday 12/22/2008, in response to NRC report #893129, and at the request of Roane County EMA and Tennessee EMA, OSC Sims and START mobilized to the Tennessee Valley Authority Kingston Fossil Plant, Harriman, Roane County, TN to the incident involving the release of an estimated 2 million cubic yards of coal ash to the Emory and Clinch Rivers. The incident occurred around 0100 hrs on Monday when the retention wall of one of the on-site holding ponds failed. The cell was one of three at the facility used for dewatering fly ash. The release caused a massive mudslide that disrupted power and ruptured a gas line, causing the evacuation of a nearby neighborhood.

Current Activities

Activities conducted during this reporting period (12/22/2008 - 12/24/2008)

12/22/2008

Immediately upon arrival to the scene, at approximately 1530 hours, OSC Sims met with representatives from Roane County EMA and Tennessee EMA. Information obtained from the briefing indicated that approximately 3 million cubic feet of fly ash and water released onto land adjacent to the plant and into the nearby Emory and Clinch Rivers. County and State EMAs requested EPA assistance to monitor the cleanup, provide water quality sampling and help establish a unified command system to include key State and County response personnel. Following the meeting, the OSC met with TVA representatives and was provided the following information:

The release resulted when the northwest earthen dike of one of three dewatering cells failed. To date, no cause has been identified for the failure. Initial reports of an oil spill could not be substantiated nor were there evidence of oil or sheen observed during TVA over-flights of the Emory or Clinch Rivers. The initial release of material from the cell created a tidal wave of water



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and ash which destroyed several homes and ruptured a gas line in an adjacent neighborhood, and resulted in the evacuation and temporary relocation of an estimated 15-20 residents. TVA has taken responsibility for the cleanup and deployed the necessary resources to mitigate the release.

Operations conducted on Monday included residential evacuation/relocations, conducting damage assessments along a 6 mile stretch of the Emory and Clinch Rivers and Watts Bar Lake, collection of water quality samples, and ash/debris removal from the railway and surface roads impacted by the release.

EPA assisted in integrating representatives from TEMA, Roane County EMA, and TDEC into TVA's command structure (currently operating as Command and Control). EPA was invited to accompany TVA engineers on an overflight of the area at daybreak. Due to the heavy local and national media coverage of the incident, EPA Region 4 External Affairs and Regional Counsel offices were briefed on all site/response-related activities conducted, to date.

12/23/2008

PRP-lead operations continue at the Site. TVA crews continue to work night operations to clear roads and restore utilities. To date, 80% of electrical power has been restored and the ruptured gas line repaired. Water line repairs continue. The total number of residents displaced by the release was confirmed at 22. Most of the evacuees remain sheltered at local hotels. The OSC accompanied TVA containment engineers on an overflight of the release area and downstream to the City of Kingston's water intake. Movement of the fly ash appears static at this time and confined to the north portion of the facility. Containment wall "C", northeast dike of the active ash pond, reportedly compromised by the release, was reported by TVA containment engineers to be "sound and stable."

Analytical results received by EPA from TVA's water quality sampling event conducted on Monday was forwarded to EPA TSS and ATSDR for review. TVA indicated it will provide a copy of the sampling and analysis report to EPA once finalized. In an effort to fill data gaps, EPA tasked START to collect water quality and sediment samples. The sampling program encompassed an area approximately one mile upstream of the release area (background) on the Emory River progressing downstream approximately six miles and terminating at the City of Kingston's main water intake. A fly ash sample was also collected near the release point along the bank of the Emory River. The samples were submitted for total and dissolved metals, total suspended solids and BTEX.

TVA reported the discovery of 50-100 dead fish during the initial release and indicates there have been no additional dead fish observed since that time. The Tennessee Department of Wildlife Resources performed an assessment of the Emory and Clinch Rivers and confirmed no observation of additional fishkill to the two waterways.

TVA continues to coordinate with USACOE in establishing a comprehensive work plan to address anticipated dredging, material recovery and dike repair. Rains are forecasted for the next few days and, in anticipation of this event, TVA is in the process of deploying surface boom at the channel inlets located southeast of the release area to reduce any potential risk of downstream migration of the ash. Riprap installation is scheduled to begin once pump-down operations at the ash pond have been completed. Pump-down operations are expected to be completed by week's end, barring an event of heavy precipitation.

An update of all response-related activities was communicated to EPA Region 4 External Affairs and Regional Counsel.

12/24/08

PRP-lead operations continue at the Site. TVA crews continued to work night operations to clear roads and restore utilities. Electrical power has been restored to the impacted area. Crews continue to replace damaged water lines. Fly ash movement appears to remain static. Skimmer and boom management is in-place and operating effectively to remove cenospheres from the waterways.

1600 hrs

Bridge Call(TVA and outside agencies)

TVA reports command and some field operations will be "scaled back" during the Christmas holiday (thur-sun), and ramp back up on Monday (12/29). Field operations involving railroad and roadway clearing, and utility line restoration will continue on a 24 hour basis. Bridge call updates are expected to continue through the weekend to provide updates on site activities and to answer any cleanup-related questions.

Operations are expected to continue for several months. All key County and State response personnel/stakeholders have representatives integrated directly, or via liaison, into TVA's command and control system.

Preliminary sampling results from EPA's water sampling program, conducted on Tuesday (12/23) are expected by the end of the week, at which time it will be forwarded to ATSDR for review and possible health consult.

Recent reports of the amount of material released from the holding cell is estimated at between 3 and 5 million cubic yards, as opposed to "cubic feet" as previously reported.

OSC Sims was relieved by OSC Stilman for the Christmas holiday weekend.

Next Steps

EPA will continue in its support and monitoring role, and conduct all actions necessary to ensure the protection of public welfare/or the environment posed by the release/threatened release of hazardous substance(s).

Key Issues

Impact/evacuation of residential neighborhood.

Potential exist for impact to Emory and Clinch Rivers, Watts Bar Lake and downstream receptors.

Potential exist for dermal/or airborne contact as temperatures rise and ash pile dries.

TVA has taken responsibility for the cleanup and has deployed key resources to mitigate the incident.

EPA continues in a support role and is closely monitoring the incident.

www.epaosc.net/TVAKingstonFlyAshRelease